REMARKS

In response to the office communication dated May 20, 2004, applicants respectfully provide the amendments specified above and the following remarks in support of the patentability of the remaining claims. It is believed that the remaining claims, as amended, are allowable over the prior art of record, and early notification of allowance is respectfully requested.

Claims 1 - 12 were filed with this application. Each claim has been amended herewith for clarity of language and conformity with U.S. filing practice, as more specifically discussed below. Claims 1 - 12 remain in the application.

The Official Action states that the claims are objected to because reference characters are included which are not within parentheses. The claim amendments submitted herewith have removed all reference characters from the claims so that this objection is now moot.

The Official Action objects to the drawings under 37 C.F.R. 1.83(a) as failing to show te protocol engine appearing in claims 1 and 7. In discussing the drawings which illustrate the switching nodes of an ATM connection of the present invention, the specification mentions a protocol engine in several places. The figures, on the other hand, illustrate specific functions, such as ATM Label Lookup, Enqueue, Dequeue, Append Routing Header, etc. As used herein, the term 'protocol engine' is a shorthand way of referring to the group of functions performed in each adapter when routing cells according to the ATM protocol. For instance, on page 7 at line 6, the specification states that "the protocol engine of adapter B1 identifies the incoming cell using the ATM Label Lookup..." At line 18 of the same page, the specification states that "the protocol engine places the cell in an appropriate queue", obviously referring to the Enqueue function. On the same page at line 28, the specification states "similarly to the protocol engine of the input adapter, the protocol engine of the output adapter

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identifies the cell by performing a lookup..., runs traffic management functions, places the cell in the appropriate queue 50 and removes the cell..." This description clearly encompasses the Label lookup, enqueue and dequeue functions and points out that the protocol engine of the input adapter performs essentially the same functions. On page 8 at line 5, the specification states that "the protocol engine transmits the cell on destination port P2...", referencing the XMIT function.

These descriptions of the protocol engine, and other similar language appearing in the discussion of the other figures, make it clear that the term 'protocol engine' encompasses the cell processing functions of each adapter (input and output) of a switching node. These functions include ATM Label Lookup, Enqueue, Dequeue, Append Routing Header, XMIT, Routing Label Lookup, and Remove Label ATM Label Swap. A proposed drawing change has been submitted herewith adding a dotted line box around these functions with a reference character of 38 for the set of functions associated with an input adapter and a reference character of 39 for the set of functions associated with an output adapter. These reference characters have also been added in several places within the specification, as appropriate.

The Official Action goes on to reject claims 2-7 and 8-12 under 35 U.S.C. 112, second paragraph as being indefinite. Specifically, claims 2 and 8 are rejected because the term "control point" is not understood. The Official Action states that the "specification describes the manner in which a loop condition bit is set but does not appear to reference a control point." In fact, on page 6 at line 8 it is pointed out that each switching node comprises a control point as shown in Figure 1. Then, on page 9 at line 22, the specification describes how "a loop control bit has to be set by the control point of the switching node..." It is to this function which claims 2 and 8 refer.

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With respect to claims 4 and 10, the Official Action states that the "applicant refers to "said loopback cell"(line 2) but indicates in claims 3 and 9, respectively, that the loopback cell is to be considered a normal cell." The amendments submitted herewith eliminate this terminology from these claims so that this rejection has been mooted.

Finally, the Official Action states that "lines 3-6 are difficult to understand." Applicants are unsure at to which claims this comment refers, but, as the wording of the claims has been clarified by the amendments submitted herewith, this rejection has hopefully been mooted as well.

The Official Action goes on to reject claims 1, 2, 7 and 8 under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,710,760 to Moll. The Official Action states that Moll discloses "in the event a loopback endpoint (adapter) determines that a test cell is to be looped back as indicated (detecting) by loopback indication 18, the loopback indication (routing label) is changed (appending) and the cell is looped back (transmit) to the source endpoint." Moll uses a separate user interface to setup the loopback test in advance, notifying the source endpoint node and destination endpoint node of the upcoming loopback test (see column 4, lines 13-40, for example). This extra, special processing in preparation for the loopback test is in stark contrast to the present invention which avoids the need for dedicated or special processing in order to perform a loopback test. The loopback cell of Moll is not processed like a normal cell, using the functions and elements of the switching node in a normal manner, but is processed using special text procedures and functions, creating additional overhead and expense in each switching node in order to support loopback testing.

The wording of claims 1 and 7 has been amended to further clarify that the routing label processing used in the present invention involves treating the loopback cell as a normal cell which happens to be traveling the connection in the opposite direction. All of the other claims in the
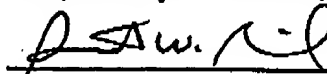
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application depend either directly or indirectly from claim 1 or claim 7.   All other amendments to the claims have been submitted in order to clarify the wording of the claims and do not affect the meaning or scope of the claims in any way.

Applicants note with appreciation the Examiner's finding that claims 3-6 and 9-12 are objected to but would be allowable if rewritten to include all the limitations of their base claims and any intervening claims.

Therefore, the Applicants respectfully submit that the present application has been placed in condition for allowance and request early notification of the same. In the event the Examiner feels there are issues of patentability remaining, the favor of a telephone call is requested to the Applicants' attorney at the number below.

Respectfully Submitted,

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